Amendment to the Specification:

Rewrite the carryover paragraph from page 1 to page 2 as follows:

When firmware which allows instructions to run on a flash memory system such as a memory card needs to be updated, a user generally sends the card back the manufacturer of the memory card. The manufacturer may update the firmware on the memory card, *e.g.*, a ~~Compact Flash~~ COMPACT FLASH (CF) card or a Secure Digital (SD) card, to provide new features for the card, or to fix bugs in the firmware. Typically, the manufacturer may use specialized hardware to update the firmware. As will be appreciated by those skilled in the art, processes used to update firmware in memory cards are generally complicated, and subject to error. Therefore, updating the firmware in a memory card is often a time-consuming, difficult process for the manufacturer of the memory card.

Rewrite the third full paragraph of page 5 as follows:

Fig. 5 is a process flow diagram which illustrates the steps associated with updating firmware on a ~~Compact Flash~~ COMPACT FLASH memory card in accordance with an embodiment of the present invention.

Rewrite the seventh full paragraph of page 5 as follows:

Fig. 7a is a diagrammatic representation of a command descriptor block associated with a Media Card Execute CF command which is suitable for use in a system with a ~~Compact Flash~~ COMPACT FLASH memory card in accordance with an embodiment of the present invention.

Rewrite the eighth full paragraph of page 5 as follows:

Fig. 7b is a diagrammatic representation of a block which may be returned to a ~~Compact Flash~~ COMPACT FLASH memory card in response to a Media Card Execute CF command in accordance with an embodiment of the present invention.

Rewrite the ninth full paragraph of page 5 as follows:

Fig. 8a is a diagrammatic representation of a command block register data associated with a Check ISP command that is suitable for use with a ~~compact flash~~ COMPACT FLASH card in accordance with an embodiment of the present invention.

Rewrite the first full paragraph of page 6 as follows:

Fig. 8b is a diagrammatic representation of a command block register data which may be returned by a ~~compact flash~~ COMPACT FLASH card to a reader in accordance with an embodiment of the present invention.

Rewrite the second full paragraph of page 6 as follows:

Fig. 8c is a diagrammatic representation of a command block register data that may be sent from a ~~compact~~ COMPACT FLASH card to a reader when an error has been encountered in processing a Check ISP command in accordance with an embodiment of the present invention.

Rewrite the third full paragraph of page 6 as follows:

Fig. 8d is a diagrammatic representation of a command block register data that may be sent to a reader from a ~~compact flash~~ COMPACT FLASH card as part of a Media Card Execute CF ISP command in accordance with an embodiment of the present invention.

Rewrite the fourth full paragraph of page 6 as follows:

Fig. 8e is a diagrammatic representation of a command block register data that may be sent between a ~~compact flash~~ COMPACT FLASH card and a reader which indicates that a Media Card Execute CF ISP command has executed normally in accordance with an embodiment of the present invention.

Rewrite the fifth full paragraph of page 6 as follows:

Fig. 8f is a diagrammatic representation of a command block register data that may be sent from a ~~compact flash~~ COMPACT FLASH card to a reader to indicate that a Media Card Execute CF ISP command has not executed normally in accordance with an embodiment of the present invention.

Rewrite the second full paragraph of page 7 as follows:

A memory card which is suitable for use in an overall system which allows the firmware associated with the memory card to be updated is generally used in conjunction with a host system. Referring initially to Fig. 1, a general host system that includes a non-volatile memory device, *e.g.*, a ~~compact flash~~ COMPACT FLASH memory card or a Secure Digital (SD) card, will be described. A host or computer system 100 generally includes a system bus 103 which allows a microprocessor 108, a random access memory (RAM) 112, and input/output circuits 116 to communicate. It should be appreciated that host system 100 may generally include other components, *e.g.*, display devices and networking devices, which are not shown for purposes of illustration.

Rewrite the carryover paragraph from page 8 to page 9 as follows:

While non-volatile memory device 120 has generally been described as including a memory control system 128, *i.e.*, a memory controller, it should be understood that not all non-volatile memory devices include a controller. By way of example, while non-volatile memory devices including, but not limited, PC cards, ~~Compact Flash~~ COMPACT FLASH cards, ~~Multi Media~~ MULTIMEDIA cards, and Secure Digital cards include controllers, other non-volatile memory devices including, but not limited to, ~~Smart Media~~ SMART MEDIA cards and ~~Memory Stick~~ MEMORY STICK cards may not include controllers. In an embodiment in which non-volatile memory device 124 does not include a controller, the functions associated with the controller may be integrated into a single chip, as will be appreciated by those skilled in the art. It should be understood that non-volatile memory device 120 may generally be implemented as either a single-chip device or a multi-chip module, as previously mentioned.

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Rewrite the third full paragraph on page 12 as follows:

It should be appreciated that the steps associated with updating the firmware on an SD card may also be applied to updating the firmware on a ~~MultiMedia~~ MULTIMEDIA card (MMC). As such, steps associated with process 400, though described in terms of an SD card, are generally also applicable to an MMC card.

Rewrite the first full paragraph on page 16 as follows:

Alternatively, if it is determined in step 508 that the reader does support ISP, then the host sends a command <u>in step 516</u>, *e.g.*, a SCSI Check ISP command, to firmware on the reader to enable ISP support. One embodiment of a Check ISP command that is suitable for use with respect to a CF card will be described below with respect to Fig. 8a. After the Check ISP command is sent <u>in step 516</u>, ISP support is enabled on the reader in step 520. Enabling ISP support may include in one embodiment, setting bit zero in the eighty-sixth word of IDENTIFY DEVICE information to '1' in response to the Check ISP command.

Rewrite the second full paragraph on page 17 as follows:

As mentioned above with respect to Figs 4a and 4b, an overall system which supports ISP for SD cards includes recognition of a Check ISP command. That is, an ISP feature set that is associated with SD cards includes a Check ISP command. Figure 6a is a diagrammatic representation of a command descriptor block for a Check ISP command in accordance with an embodiment of the present invention. A Check ISP command descriptor block 602 generally includes twelve bytes 606a <u>through 606l</u>, each with eight bits 610a <u>through 610h</u>. Block 602 is associated with a D0h command code, and is essentially a component of a SCSI command that is sent from a host to a reader, *e.g.*, from a host to firmware associated with a reader.

Rewrite the carryover paragraph from page 18 to page 19 as follows:

In one embodiment, the reader may return a data block to the host in response to a Check ISP command. Fig. 6b is a diagrammatic representation of a data block that is returned to a host in response to a Check ISP command in accordance with an embodiment of the present

invention. A data block 622 includes three bytes 626a through 626c of eight bits 630a through 630h each, and is sent from a reader to a host as a confirmation of a received Check ISP command. It should be appreciated that when a reader that receives a Check ISP command is incapable of supporting ISP, then the reader may may return a code to the host which indicates that the Check ISP command was, in effect, invalid. An invalid command is identified by the SCSI Sense Data Format with ILLEGAL REQUEST, value 5, as the Sense Key and INVALID FIELD IN CDB, values 24h and 00h, as ASC and ASCQ.

Rewrite the carryover paragraph from page 19 to page 20 as follows:

Fig. 6c is a diagrammatic representation of a Media Card Execute SD command descriptor block in accordance with an embodiment of the present invention. A Media Card Execute SD command block 652 that may be arranged within a corresponding SCSI command descriptor (not shown) is arranged to allow a host to send a command to an SD card which passes through a reader, and is associated with a D1h command code. Block 652 is generally arranged as an SD command, with twelve bytes 656a through 656l, each with eight bits 660a through 660h, which is embodied in an overall SCSI command, or a wrapper. A byte 656a is arranged to contain information associated with an operation code which, in the described embodiment, is consistent with a D1h command code. Byte 656b is reserved, as shown in Fig. 6c.

Rewrite the carryover paragraph from page 21 to page 22 as follows:

A Media Card Execute command which is suitable for use for an SD card is generally different from a Media Card Execute command which is suitable for use with a CF card. With reference to Fig. 7a, one embodiment of a Media Card Execute CF command which is suitable for use in a system which allows updates to be made to firmware associated with a CF card will be described in accordance with the present invention. A command descriptor block 702 for a SCSI Media Card Execute CF command, which is generally embedded inside an overall SCSI command descriptor, includes twelve bytes 706a through 706l, each of eight bits 710a through 710h each. The Media Card Execute CF command is generally consistent with a D2h command

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code. A byte 706a is arranged to contain information associated with an operation code which, in the described embodiment, is consistent with a D2h command code.

Rewrite the first full paragraph on page 22 as follows:

Bytes 706f-k are substantially filled using ATA task file registers. In other words, bytes 706f-k may correspond to ATA commands 1F2 through 1F7 such that task file registers associated with the CF card may be returned as data. Task file registers may include, but are not limited to, an error register, a sector count register, a sector register, a cylinder low register, a cylinder high register, a device/head register, and a command/status register, as will be understood by those skilled in the art. Typically, bytes 706f-k may be extracted by a reader and sent to the CF card. For an embodiment in which data is to be transferred from the CF card to the reader, register values may be retrieved from the CF card and returned to the host through the reader in the format shown in Fig. 7b. As shown, a block 752 as shown in Fig. 7b includes ~~bits~~ bytes 716c-j which correspond to ~~bits~~ bytes 706c-j of block 702, though ~~bits~~ bytes 716c-j will generally have different task file register values. Block 752 also includes byte 716k, which corresponds to a command/status register, as shown in Figure 7b and as will be understood by those skilled in the art.

Rewrite the first full paragraph on page 23 as follows:

A Check ISP command which is suitable for use with a CF card may be generated by reader firmware, and sent to a CF card. In this described embodiment, such a Check ISP command may also be suitable for use with a SD card. That is, a Check ISP command may be the same for a CF card and for a SD card. Such a Check ISP command may be consistent with a D5h command code for a CF card, and is typically sent from a reader to a flash card once the reader generates the command. Fig 8a is a diagrammatic representation of a command block associated with a Check ISP command that is suitable for use with a CF card in accordance with an embodiment of the present invention. A command block 804 includes bits 808a through 808h associated with each of registers 812a through 812g. Registers 812, in one embodiment,

may be associated with bytes 706f-706k of Fig. 7a. That is, block 804 may effectively be embedded in block 702 of Fig. 7a.

Rewrite the carryover paragraph from page 24 to page 25 as follows:

When there is an error in processing a Check ISP command, an error output block may be sent from a CF card to a reader. Such an error output block may generally indicate that ISP support is not enabled. Fig. 8c is a diagrammatic representation of an error data block that may be sent from a CF card to a reader when an error has been encountered in processing a Check ISP command in accordance with an embodiment of the present invention. An error data block 824 includes registers 832a through 832g which are divided into bits 828a through 828h. When an error occurs in processing a command such as a Check ISP command, a bit in an error register 832a, e.g., a bit 828c, is generally set to indicate that the command has not been processed successfully. In one embodiment, bit 828c of error register 832a may be set to a value of '1' to indicate that a command has been effectively aborted.

Rewrite the first full paragraph on page 26 as follows:

Fig. 8d is a diagrammatic representation of a command block that may be sent between a reader and a CF card as a part of a Media Card Execute CF ISP command in accordance with an embodiment of the present invention. A command block 844 includes registers 852a through 852g which include eight bits 848a through 848h each. A command register 852g is arranged to indicate that block 844 is consistent with a D6h command code, while a feature register 852a includes 848b-h which are arranged to return a 0h value and a bit 848a which is arranged to specify a direction of data transfer. When firmware is to be read from the CF card, bit 848a of feature register 852a may be set to a value of '1', whereas when firmware is to be written to the CF card, bit 848a of feature register 852a may be set to a value of '0'.

Rewrite the carryover paragraph from page 26 to page 27 as follows:

With reference to Fig. 8e, one embodiment of a command block that may be sent between a CF card and a reader which indicates that a Media Card Execute CF ISP command

has executed normally will be described. A command block 864, which includes registers 872a through 872g ~~bits 868~~ which are each divided into ~~registers 871~~ bits 868a through 868h, may be sent from the CF card to the reader when a command has executed substantially successfully. Registers 872a-e may be substantially cleared, while a device/head register 872f may include a bit 868e which indicates the device, and may be set to a value of '0' with only one media card attached to the reader,[[,]] which is effectively the target associated with the execution of the command.

Rewrite the second full paragraph on page 27 as follows:

When an error occurs in processing a command such as a Media Card Execute CF ISP command, an error data block may be sent from a CF card to a reader to indicate that an error has occurred. Errors may occur during the processing of a command, for example, when a host expects the CF card to have 20kiloBytes (kBs) of firmware, and the CF card actually has 10 kBs of firmware. Fig. 8f is a diagrammatic representation of an error block that may be sent from a CF card to a reader to indicate that a Media Card Execute CF ISP command has not executed normally in accordance with an embodiment of the present invention. An error data block ~~892~~ 884 includes bits 888a through 888h which are associated with each of registers 892a through 892g. A status register 892f includes a bit 888e which identifies the device or CF card which the aborted command was targeting.

Rewrite the first full paragraph on page 30 as follows:

Further, memory cards which have firmware that may be updated using ISP commands may be widely varied. Other types of memory cards which have firmware that may be updated using the methods described above include, but are not limited to, ~~Memory Stick~~ MEMORY STICK cards and ~~Smart Media~~ SMART MEDIA cards.